Organizing for the Future:
The Army's Objective Force Cavalry Squadron

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Executive Summary

Title:

      The Objective Force Cavalry Squadron: Organizing for the Future.

Thesis:

      The organization of the United States Army's Objective Force Reconnaissance, Surveillance and Target Acquisition (RSTA) squadrons must be based on both historic cavalry missions and emerging Information Age roles.

Discussion:

      The United States Army is transforming its force structure. This transformation is designed to better meet the challenges presented by and to leverage the opportunities available in the future. This effort is designed to lessen the distinction between what the Army often refers to as its "heavy" and its "light" forces. America's Army was ideally suited for military operations in Europe or on the Korean peninsula. However, as the Cold War ended, America's enemies became more ambiguous, but no less dangerous.

      In this uncertain and dangerous world, the United States Army must be fully prepared to deploy rapidly to contain, stabilize or resolve conflict through shaping actions or decisive combat operations.

      Currently, the Army has transformed one infantry battalion and one tank battalion into its Interim Force Reconnaissance, Surveillance and Target Acquisition (RSTA) Squadrons. These units are organized, equipped and trained to deal both the challenges and the opportunities of the near term future by providing reconnaissance and surveillance to the maneuver commander.

      While the Interim Force RSTA squadrons are a move in the right direction, there remain challenges for these units and for the Objective Force reconnaissance and surveillance units of the future. Force structure proponents must maintain a balance between the historical intelligence requirements and the futuristic information opportunities. This unit must be more than an intelligence gathering origination. It must incorporate emerging technologies and organizational techniques within its military infrastructure, always able to employ the correct force structure or combat power to achieve its battlefield mission.

Conclusion:

      The Objective Force Brigade Combat Team must include a Cavalry Squadron comprised of both ground and air assets capable of performing reconnaissance and surveillance type mission throughout the spectrum of combat. The Squadron must utilize manned and unmanned weapons and platforms to conduct its combat critical mission. It must also have the capability of employing organic combat power to allow it to freely fire and maneuver throughout the battlefield in order to gain and maintain contact with enemy forces, regardless of their size or composition.

The United States Army's cavalry force stands at a crossroad; a crossroad between a historic past and a promising future. By embracing today's emerging technologies and organizational techniques, the United States Cavalry can better perform its battlefield mission. Properly organized and equipped cavalry squadrons will be able to better provide the maneuver commanders with the reconnaissance and surveillance that will allow the United States Army to dominate any future enemy.

As our world moves from the Industrial Age into the Information Age, or what many call the "Third Wave," society is beginning to view wealth and power through a different lens. Alvin and Heidi Toffler, noted in their book, War and Anti-War that:

> While the value of a Second Wave company might be measured in terms of its hard assets like buildings, machines, stocks, and inventory the value of successful Third Wave firms increasingly lies in their capacity for acquiring, generating, distributing, and applying knowledge strategically and operationally.[1]

Therefore, if control of information becomes the new measure of battlefield effectiveness; and if collection, dissemination and application of intelligence is the foundation of Joint vision's precision strike and dominate maneuver;[2] then America's Army needs trained and equipped soldiers and units dedicated to this combat critical task.

The Army is in the midst of this transformation with the fielding of the Interim Brigade Combat Team (IBCT) and its organic Reconnaissance, Surveillance and Target Acquisition (RSTA) squadron. Army force development planners must understand the roles and missions of current cavalry units and then they must integrate new organizations and concepts to maximize the benefit offered by burgeoning technology.

The organization of the United States Army's Objective Force Reconnaissance, Surveillance and Target Acquisition (RSTA) squadrons must be based on both historic cavalry missions and emerging Information Age roles.

The Army's response to preparing for future war is a three-pronged approach. First, the Army will maintain a portion of its current force structure to meet near term requirements. Secondly, the Army has begun to retrain, reorganize and rearm certain units into Interim Brigade Combat Teams, also referred to as IBCTs. Finally, the Army will incorporate lessons from both its current and interim forces, along with emerging technologies, into the Objective Force. It is this Objective Force, supported by its cavalry squadrons that will fight and win the Nation's future wars.

The current United States Army lexicon refers to the Interim and the Objective Force cavalry as the Reconnaissance, Surveillance and Target Acquisition (RSTA) squadron. This trendy term is simply a "futuristic" label for the missions cavalry units traditionally accomplish.

As the Army integrates emerging capabilities and technologies into the cavalry force structure, it needs to maintain a balance with the traditional roles and missions of the cavalry force. The six traditional roles assigned to the cavalry are: provide timely information and intelligence, provide reaction time and maneuver space for the higher headquarters, preserve combat power through economy of force missions, restore command and control, facilitate movement and perform rear area operations.[3]

Currently, the United States Army is fielding two reorganized cavalry squadrons, or RSTA units. These units are assigned to the Army's first two Interim Brigade Combat Teams (IBCT) at Fort Lewis, Washington.

The RSTA nomenclature is passive in nature and limits the capabilities of the squadron. Cavalry organizations have always performed RSTA type missions, but have historically been capable of both passive and active battlefield actions. The current RSTA Squadron organization requires, but does not have, the capability or the

organization to fight to gain information, nor to accomplish it's other historic roles and

missions.

> The ability to see the battlefield and to know the enemy, combined with the speed
> to exploit these advantages, will fundamentally change the dynamics of fire and
> maneuver. A commander able to observe enemy movements with fine granularity
> would be able, with confidence, to divide his own forces into comparably fine
> increments and positions each precisely enough to control and dominate each
> discrete bit of enemy combat power. The ability to employ many small units at
> once would allow a commander to cover a larger operational area with discrete
> combat elements.[4]

The battlefield potential offered by a properly organized, equipped and trained cavalry

unit is the foundation for the United States Army's future war.

Trends within the Army's organization have seen larger cavalry units assigned to

and supporting smaller maneuver units. During the Second World War, American

infantry divisions in the European Theater of Operations had an organic cavalry troop

assigned; while smaller, yet more mobile, armored divisions had an organic squadron.[5]

By the end of the Twentieth Century, a cavalry regiment supported an Army corps and

cavalry squadrons were organic to all divisions. Acknowledging this trend and

recognizing the critical requirement for battlefield reconnaissance and surveillance, the

interim and objective force brigades will be supported by a cavalry squadron. The

Army's Objective Force brigade combat teams will each have a cavalry squadron within

its Table of Organization and Equipment.

In a *Strategic Review* article, "An Information-Based Revolution in Military
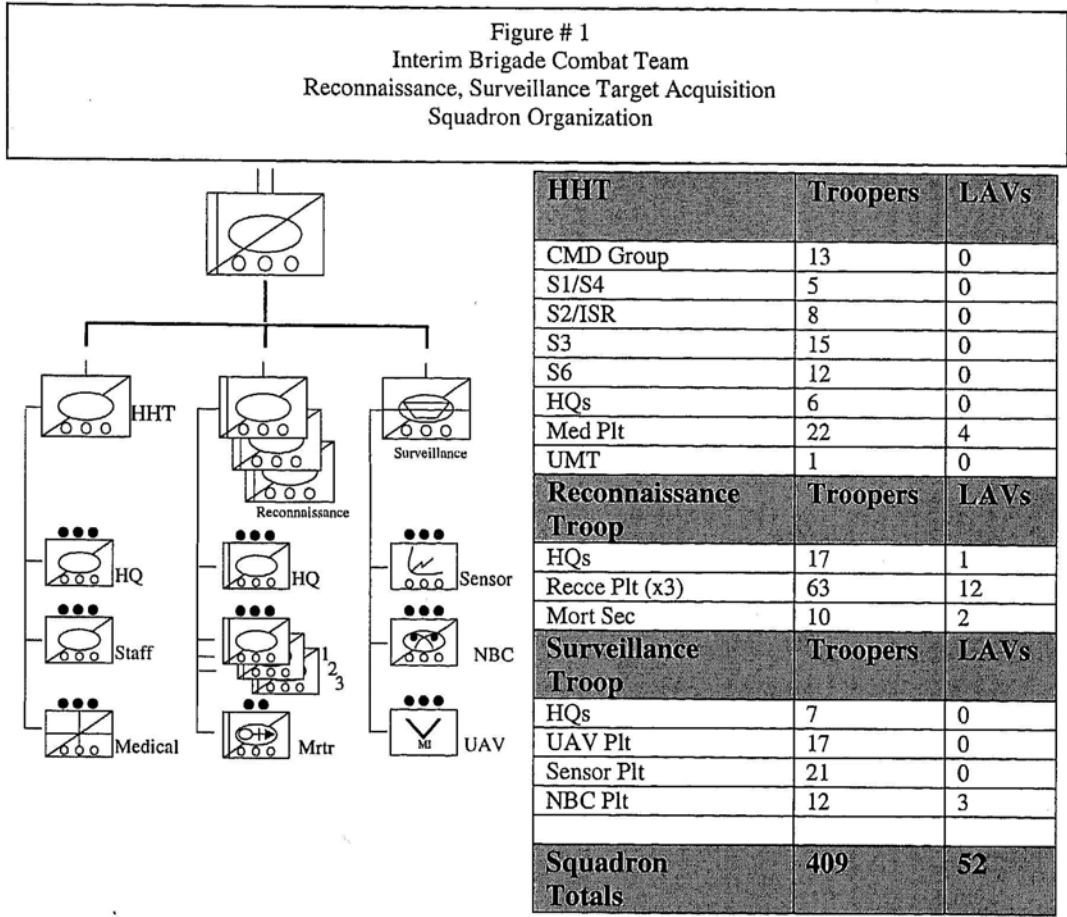
Affairs" Norman Davis wrote:

> Waging war in the post-modem era will require major innovations in
> organizational design, in particular a shift from hierarchical to network structures.
> The traditional reliance on hierarchical designs must be replaced with network-
> oriented model to allow greater flexibility, lateral connectivity, and teamwork
> across institutional boundaries.[6]

It is difficult for a military organization based on rank and command structure to break from its hierarchical organization and transform into some network based, amorphous mob. Alvin Toffler, in his landmark work Future Shock, correctly stated, "The typical bureaucratic arrangement is ideally suited to solving routine problems at a moderate pace. But when things speed up, or the problems cease to be routine, chaos often breaks loose."[7] Recent events, in both military and civilian sectors, have shown the ever-increasing and often chaotic tempo of life in the 21st Century.

To deal with this tempo, commanders require more information at a faster pace. Lieutenant Colonel Dana Pittard, commander of the Army's first reorganized cavalry squadron commented in *ARMOR* magazine, "In the Information Age, the time necessary to make a decision and then to act upon that decision will be greatly condensed."[8] The future cavalry squadron must be organized to leverage a traditional military hierarchical chain of command; but also must be able to form network nodes to rapidly respond to reconnaissance and surveillance opportunities and requirements frequently found on the future, noncontiguous battlefields. The challenge faced by today's Army is to harness the benefits of a network based, information focused force; while maintaining the lethality and the cohesion necessary for combat success.

The Army's current attempt to harness these opportunities and to minimize possible chaos is the IBCT's RSTA squadron. This unit is currently organized around three reconnaissance troops and one surveillance troop, with a Headquarters and Headquarters Troop in support. The Recce Troop is organized with three reconnaissance platoons and a mortar section. The Surveillance Troop is organized with a UAV platoon, a sensor platoon and a NBC reconnaissance platoon. The support structure within the

Headquarters and Headquarters Troop is limited to medical and staff support. All other forms of logistical operations are to be provided by the IBCT support system.

Figure # 1
Interim Brigade Combat Team
Reconnaissance, Surveillance Target Acquisition
Squadron Organization

HHT	Troopers	LAVs
CMD Group	13	0
S1/S4	5	0
S2/ISR	8	0
S3	15	0
S6	12	0
HQs	6	0
Med Plt	22	4
UMT	1	0
Reconnaissance Troop	**Troopers**	**LAVs**
HQs	17	1
Recce Plt (x3)	63	12
Mort Sec	10	2
Surveillance Troop	**Troopers**	**LAVs**
HQs	7	0
UAV Plt	17	0
Sensor Plt	21	0
NBC Plt	12	3
Squadron Totals	**409**	**52**

(The above organization chart and equipment matrix were extracted from ARMOR Magazine.[9])

Major General B.B. Bell, Commanding General of the United States Army Armor Center and Fort Knox, recently remarked, "The Brigade's RSTA Squadron is designed to give the Brigade Commander high levels of situational understanding throughout the Brigade's battlespace."[10] He went on to describe the RSTA Squadron as "a unit optimized for multi-dimensional reconnaissance and surveillance operations in small scale contingencies operating in complex and urban terrain."[11] While General Bell's comments are collect and while the IBCT cavalry squadron organization is a step in the right direction; this Interim Force organization is just that, interim.

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A recently published article in *ARMY* magazine states that, "The interim force is a stopgap force in several ways and a leap-ahead force in others."[12] While this may be true, Army force development planners cannot become enamored with today's interim force. The *ARMY* article goes on to correctly sum up, "The objective force represents the art of the possible, what can be done to equip, organize and train units to assimilate the best aspects of the heavy, light and interim forces."[13] However as John Arquilla and David Ronfeldt wrote in a RAND Corporation study entitled, In Athena's Camp: Preparing for Conflict in the Information Age:

> It may take time to realize that inserting the new technology into old ways may create some new inefficiencies, even as some activities become more efficient. It may take still more time to realize that the activity itself — in both its operations and organizational dimensions — should be restructured, even transformed, in order to realize the full potential of the technology.[14]
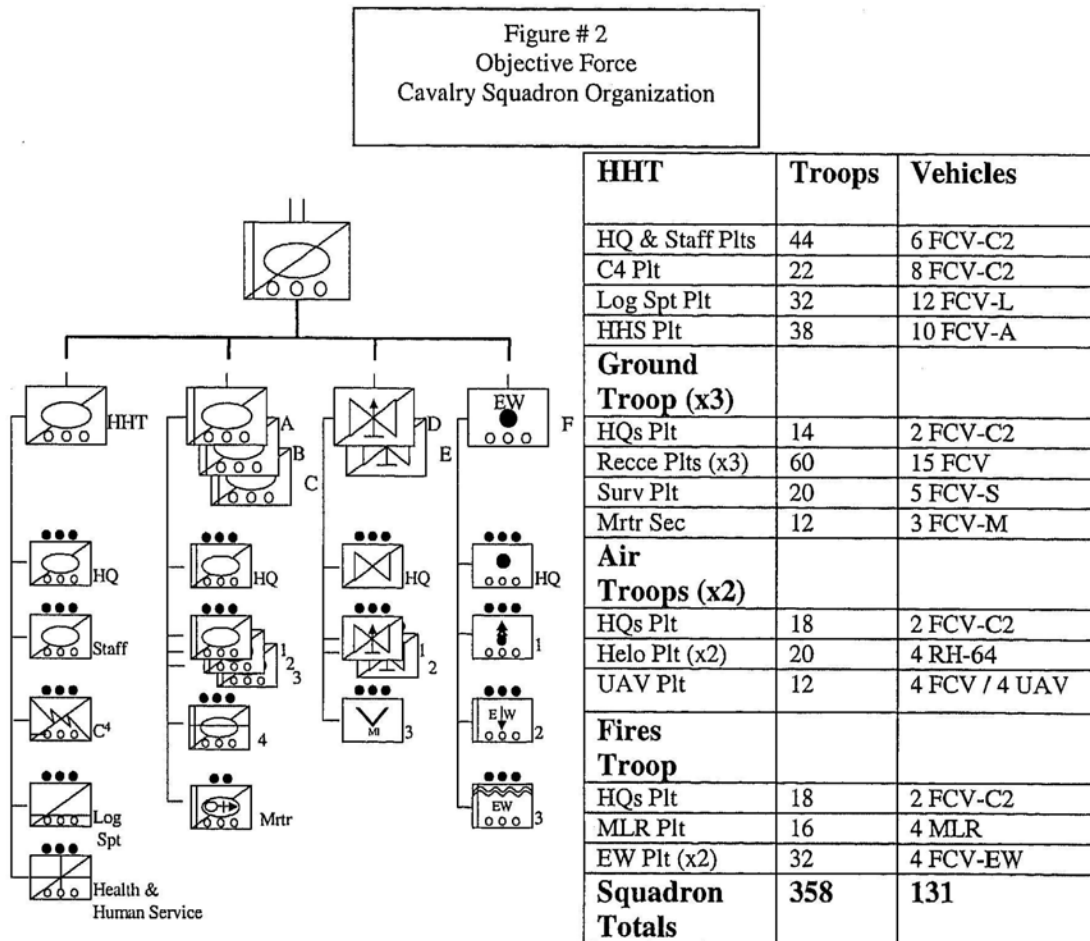
The Interim Cavalry Squadron needs to further develop into the optimal organization for the Army's Objective Force, not simply to insert new technology on old organizations.

The challenge for the future cavalry squadron organization is then to balance operational capabilities with mission requirements. One possible method of organizing the Army's Objective Cavalry Squadron would be with three ground cavalry troops, each with recce and surveillance platoons; two air cavalry troops, each with manned and unmanned aircraft, and a fires troops, with both lethal and non lethal capabilities. A headquarters and headquarters troop comprised of command and staff, C^4, logistical support and health and human services would support and assist in the squadron's mission.

For global deployment and for tactical employment, this squadron must be a self-contained organization. Dr. Williamson Murray, a noted military historian concurs. "Experience in recent wars tells us that maximum strategic speed can be best achieved by

projecting units organized into the smallest self-contained entities of all arms capable of

sustained combat."[15]

Figure # 2
Objective Force
Cavalry Squadron Organization

HHT	Troops	Vehicles
HQ & Staff Plts	44	6 FCV-C2
C4 Plt	22	8 FCV-C2
Log Spt Plt	32	12 FCV-L
HHS Plt	38	10 FCV-A
Ground Troop (x3)		
HQs Plt	14	2 FCV-C2
Recce Plts (x3)	60	15 FCV
Surv Plt	20	5 FCV-S
Mrtr Sec	12	3 FCV-M
Air Troops (x2)		
HQs Plt	18	2 FCV-C2
Helo Plt (x2)	20	4 RH-64
UAV Plt	12	4 FCV / 4 UAV
Fires Troop		
HQs Plt	18	2 FCV-C2
MLR Plt	16	4 MLR
EW Plt (x2)	32	4 FCV-EW
Squadron Totals	**358**	**131**

The ground and air troops within the squadron allow the commander maximum

flexibility in his reconnaissance and surveillance missions, while the fire troop provides

organic fires and coordinates external fire support for the squadron. A Headquarters and

Headquarters Troop provides required combat and combat service support to the entire

organization. This squadron organization is uniquely designed to gain and maintain

contact with various types of enemy forces, while maintaining its ability to maneuver

freely, and when required, to fight to gain information by confirming or denying enemy

intentions.

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The three ground troops provide all weather, sustained ground presence to the squadron and the brigade. The ground troops each have three recce platoons, one surveillance platoon and an organic mortar section.

The ground reconnaissance platoons are equipped with five of the Army's Future Scout Vehicles or FSV. The FSV is currently in the research and development phase and its required capabilities are beyond the scope of this paper. However with this system, the platoon leader will be able to rapidly gain contact with enemy forces and accurately develop the tactical situation in his area of responsibility. With five FCVs in the platoon, the platoon leader can employ his unit in either a balanced or a reinforced manner. The five vehicles also allows for a more continuous coverage of the battlespace by allowing for crew rest and vehicle maintenance.

In addition to these recce platoons, the ground cavalry troops should also have a platoon equipped and trained to conduct surveillance activities. The surveillance platoon would also be equipped with the Future Scout vehicle, but with modifications that enhance its ability to conduct surveillance throughout all mediums. The surveillance platoon would be detailed to employ and maintain the troops organic sensor array, collecting and linking data from visual, aural, electronic and other means, and them to interface this information into the squadron's sensor array database. Like the FSV itself, many of these sensors are in the R & D phase of development. If the final design of the FSV allows for one vehicle system capable of meeting the demands of reconnaissance and surveillance, then this platoon's mission would simply be absorbed by the recce platoons.

The ground cavalry troop of the future must have its own organic fire support system. Based on the FSV chassis, the cay troop would employ a three-vehicle mortar

section. Digitally linked to the troop's and the squadron's common operating picture (COP), each mortar system would be able to serve as its own fire direction center or be able to mass fires within its own section or be able to provide reinforcing fires for other units within the squadron.

With these organic units in the ground troop, the commander can employ his assets in several different configurations, based on his mission requirements. The platoons can be employed pure or further organized into smaller subordinate elements. Regardless of the configuration, the troop maintains connectivity within its organization. Situational awareness and communications are maintained laterally as well as horizontally utilizing current and emerging technologies.

The squadron has two air cavalry troops available to provide rapid and flexible employment of its unique airborne systems, in either reconnaissance or attack mode. As General Scales wrote in *Strategic Review,* "Aerial mobility permits a maneuver forces to command more territory with fewer soldiers, thus limiting the number of soldiers exposed to enemy fires within the close combat area."[16] Two air troops within the squadron allow maximum flexibility in employment, both day and night. This organization also allows the squadron commander the option to surge his air assets as required.

Each air cav troop would have two recce platoons and one unmanned aerial vehicle platoon. The manned recce platoons provide not only reconnaissance and surveillance, but are also available to provide direct fire support when required. The UAV platoon allows for the employment of assets when a manned aircraft is either not feasible or warranted.

The current organizations of the Interim RSTA Squadron and the Brigade Combat Teams do not include manned helicopters. This oversight must be rectified within the organization of the future squadron. Lieutenant Colonel Dana Pittard recently wrote, "UAVs somewhat mitigate the lack of manned air recce and provide the squadron with valuable air — ground reconnaissance capabilities."[17] UAVs should not mitigate the lack of manned aircraft, but rather enhance them.

The manned aviation platoons will be equipped with the RH-64 Comanche helicopter. Each platoon will have four of these helicopters, giving the squadron a total of 16. The primary mission of these platoons will be aerial reconnaissance. However, the organic firepower capability of the RH-64 will also give the squadron commander the ability to apply combat power throughout his battlespace.

The squadron's unmanned aerial vehicle platoons will be organized within the air cav troops. UAVs will provide surveillance throughout the squadron and the brigade combat teams area of operation.

Unlike the current plan for the Interim Brigade's cavalry squadron, this proposed Objective Force squadron has the internal assets to provide organic lethal and nonlethal fires. The future squadron has a Fires Troop comprised of three firing platoons and a headquarters / fire direction center platoon. The multiple launch rocket platoon is the primary lethal fire support asset within the squadron.

While the current organization of the IBCT includes a battalion of 155mm howitzers, the Objective force cavalry squadron must have operational control over its own fire support. Operating on extended frontages and depths, the squadron commander requires organic fire support. The MLR platoon will be able to mass fires within the squadron's area, through information superiority, target management and fire support.

Mortar sections from the ground troops also have the capability to provide indirect fires for their organic units; but when required, the Fires Troop FDC can mass the combined fires of both rockets and mortars.

The Fires Troop will also control nonlethal fires from its Intercept and Jamming Platoons. These two platoons will allow the squadron to operate effectively in the electromagnetic spectrum and assist the brigade combat team in its mission of information dominance. These platoons are mounted on a FSV like vehicles specially modified to conduct electrometric warfare (EW) operations.

The squadron must have the organic expertise and assets to command, control, and be self-supporting. The Objective Force Cavalry must have immediate access to the C^4; administrative and logistics; and health and human service, required for its high tempo operations. This is the mission of the Headquarters and Headquarters Troop. The HHT would be comprised of a Headquarters Platoon; a Staff Platoon; a Command, Control, Communications and Computers Platoon; a Logistical Support Platoon; and a Health and Human Services Platoon. The Objective Force organization is more like today's squadron HHT than that of the reduced RSTA headquarters.

Both the Headquarters and the Staff Platoons sole function is to assist the Squadron Command in his duties of providing command, control and leadership within his unit. These units are organized to fully utilize the Army Battle Command System (ABCS), specifically the Force XXI Battle Command Brigade and Below (FBCB2) system.[*]

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* For information regarding possible solutions for battle staff reorganization, see Evolving Information-Age Battle Staffs by Colonel Stephen F. Garrett, US Army and also Battle Command Systems: The Force XXI Warfighter's Advantage by Major Mark C. Malhum, US Army and Ms Debora Gabbard.

The C^4 platoon is responsible for the connectivity of the squadron. This combat critical task is the enabler for all of the squadron's other capabilities.

> Tomorrow's soldiers, themselves intelligent mobile sensors, may go armed with devices 20 to 50 times more powerful than today's laptops, digital radio-based communications capable of exchanging video data, and electronic image-quality maps updated in near real time by UAVs and other sensors.[18]

It is the C^4 Platoon that provides this critical connectivity. The C^4 Platoon ensures voice and data communication within the squadron, to the brigade communication's nodes and also provides worldwide reach back communications capability for the squadron. The platoon provides tactical data retransmission sites, Sensor Control and Management Systems, TACSAT linkage and a JSTARS Ground Station Module.

Current plans for the Interim Cavalry Squadron do not provide for internal logistical support. The entire log support mission is within the realm on the Interim Brigade Combat Team's Support Battalion. Current trends within the Army are to centralize and "push" logistics forward. However, on future and possibly noncontiguous battlefields, it is imperative that the forward unit "pull" support at the time and place that best supports operations.

Addressing logistical sustainment within the reorganized brigade combat teams, the Chief of Staff of the United States Army Armor Center stated, "Our forces need the ability to operate unilaterally, despite the associated costs. Consequently, we must continue to find ways to exploit advanced technologies and lower the logistics footprint and related costs of our support structure."[19] This reduced logistical footprint is found in total asset visibility and proper resource management, not logistical centralization. The cavalry of the future needs organic and responsive logistical sustainment. The logistical footprint is reduced, not increased with the Logistical Support Platoon as it is organized and equipped to efficiently and effectively provide logistical support to the entire

squadron. While organic to the squadron, the Logistical Support Platoon ensures integrated support from the brigade support battalion and from higher support echelons.

The Squadron's Health and Human Services Platoon will be an outgrowth of the current medical platoon within the Interim Force's Squadron. The Objective Force Cavalry requires not only health and medical support, but also human services support for both internal and external requirements. Operating across the spectrum of combat the Cavalry Squadron must have not only organic medical support, but also soldiers and equipment for interfacing with indigenous populations, and governmental and nongovernmental organizations within its area of responsibility.

Internal support to the Squadron is comprised primarily of combat trauma and preventive medicine. During external health and human services missions, the HHS Platoon is organized to accept and integrate support from outside units and agencies. The platoon's Civil-Military Section is staffed with a small core of specialists, but is specifically designed to accept subject matter, regional and cultural experts, from both governmental and non-governmental agencies and organizations. This Civil-Military Section is capable of working within the HHS Platoon structure or integrating its operations within the Squadron's command post, based on mission requirements. Embedded in the HHS Platoon is the Squadron's ongoing mission to gather and forward cultural information and military intelligence.

Within the six line troops of the Objective Squadron and the five platoons within HHT, the lines of the organization chart do not necessarily run from platoon to troop to squadron. Cavalry units have traditionally found themselves operating with unique and unexpected command relationships. This inherent flexibility and "shift in power relationships" allows for recon and surveillance missions at the tempo demanded by

tomorrow's operations. As Alvin Toffler noted, "not only are large organizations forced

both to change their internal structure and to create temporary units, but they are also

finding it increasingly difficult to maintain their traditional chains-of-command."[20] This

proposed squadron organization then allows for a compromised balance between random

organization and military hierarchy by giving the squadron commander the organizational

structure readily positioned to reorganize as the situation demands. With this proposed

organization, the squadron commander also has the organic assets to conduct his full

range of missions throughout his area of operation on tomorrow's uncertain battlefields.

The collapse of the Soviet Union and the resulting end of the Cold War, coupled

with the explosive rise in computer processing and other resulting technologies ushered

in a new era for the United States and indeed for the entire world. Optimistic Americans

saw the beginning of a period of peace, stability and prosperity. While this is largely the

case today, past history, current events and future trends all point to continued dangers

and threats to American interests. A decade ago journalists were writing about the

"peace dividend." Today, they are writing about "asymmetrical threats."[21] It is these

very threats, asymmetrical and often undefined, that America's Army must prepare for.

In an uncertain world, on a chaotic battlefield, the future cavalry squadron must be

correctly organized and must maintain the capability to rapidly reorganize as the situation

demands.

It is this organizational framework that the United States Army is evaluating with

its Interim Brigade Combat Teams and its supporting Force Reconnaissance, Surveillance

and Target Acquisition (RSTA) squadrons.

> For a half of century, the U.S. Army had been organized and equipped to meet
> American's security needs for the Cold War. Now, American's security needs
> have changed, and the Army must reorganize and reequip to better meet those
> needs while modernizing for the future in the next 15 to 30 years.[22]

It is in this environment, one of traditional roles and missions merging with new threats and new technologies, which America's Army must prepare. Writing in <u>Illuminating Tomorrow's War</u>, Martin Libinck comments, "The ability to see the battlespace clearly and quickly and pass the right information to the right warfighter at the right time can change how the United States goes to war."[23] To see the battlespace clearly, commanders must have an organization dedicated to reconnaissance and surveillance missions. A properly organized and extremely adaptive cavalry squadron fulfills this critical combat requirement and allows future brigade combat team commanders to "see" their battlespace and fight more effectively.

The Objective Force Cavalry Squadron must be organized to maximize the potential offered by new and emerging technologies, shared information and a common operating picture. The cavalry squadron commander of the future must have the ability and the assets to flexibility reorganize his units to meet the tactical situation and mission requirements. This organization requires a squadron comprised of both air and ground units, of both manned and unmanned systems, and of both combat and combat support assets.

The United States Cavalry is again operating on the frontier, the frontier of the future. The Objective Force Squadron maintains the mission of providing the commander with the battlefield intelligence he requires to accomplish his mission. This cavalry role has not changed; nor will it.

End Notes

[1] Alvin and Heidi Toffler, War and Anti-War: Survival at the Dawn of the 21st Century (Boston, New York, Toronto and London: Little, Brown and Company, 1993), 59.

[2] Chairman of the Joint Chiefs of Staff, Joint Vision 2010 (Washington, D.C.: United States Government Printing Office), 1.

[3] Field Manual17-95, Cavalry Operations (Washington, D.C.: U.S. Government Printing Office, 1996), Section 1, Page 4.

[4] Robert H. Scales, "Cycles of War," from Future War, ed. Robert H. Scales (Carlisle Barracks, Pennsylvania: U.S. Army War College, April, 1997), 11. [Originally published in Armed Force Journal International, July 1997 Volume 134, Number 12.]

[5] Office of the Theater Historian, Order of Battle United States Army World War II: European Theater of Operations — Division (Washington, D.C.: U.S. Government Printing Office, December 1945)

[6] Norman C. Davis, "An Information-Based Revolution in Military Affairs," from In Athena's Camp: Preparing for Conflict in the Information Age, ed. John Arquilla and David Ronfeldt (Santa Monica, CA: RAND, 1997), 93.

[7] Alvin Toffler, Future Shock (New York: Random House, 1970), 125.

[8] Kevin C.M. Benson and Dana Pittard, "Armor, Cavalry, and Transformation: "New" Cavalry for the Interim Force," ARMOR, March-April 2001, 8.

[9] Kevin C.M. Benson and Dana Pittard, "Armor, Cavalry, and Transformation: "New" Cavalry for the Interim Force," ARMOR, March-April 2001, 8.

[10] B.B. Bell, "Medium Weight Force Initiatives, Brigade Combat Teams: What it Means to the Armor Force," http://www.knox.army.mil/center/mwfi/whatit_means__.htm (6 January 2001).

[11] B.B. Bell, "Medium Weight Force Initiatives, Brigade Combat Teams: What it Means to the Armor Force," http://www.knox.anny.mil/center/mwfi/what it_means__.htm (6 January 2001).

[12] Dennis Steele, "The Army Magazine Hooah Guide to Army Transformation," ARMY, February 2001, 29.

[13] Dennis Steele, "The Army Magazine Hooah Guide to Army Transformation," ARMY, February 2001, 29.

[14] John Arquilla and David Ronfeldt, "Cyberwar is Coming!" from <u>In Athena's Camp: Preparing for</u> <u>Conflict</u> <u>in the Information Age</u>, ed. John Arquilla and David Ronfeldt (Santa Monica, CA: RAND, 1997), 41.

[15] Williamson Murray, "Introduction," from <u>Future War</u>, ed. Robert H. Scales (Carlisle Barracks, Pennsylvania: U.S. Army War College, April, 1997), xv.

[16] Robert H. Scales, "A Sword with Two Edges: Maneuver in 21st Century Warfare," from <u>Future War</u>, ed. Robert H. Scales (Carlisle Barracks, Pennsylvania: U.S. Army War College, April, 1997), 75. [Originally published in <u>Strategic Review,</u> Spring 1999 Issue, Volume 27, Number 2.]

[17] Kevin C.M. Benson and Dana Pittard, "Armor, Cavalry, and Transformation: "New" Cavalry for the Interim Force," <u>ARMOR</u>, March-April 2001, 10.

[18] Martin C. Libincki, <u>Illuminating</u> <u>Tomorrow's War</u> (Washington, D.C.: Institute for National Strategic Studies, National Defense University, 1999), 11.

[19] George Edwards, "Medium Weight Force Initiatives, Brigade Combat Teams: Chief of Staff Planning Directive #2," <<u>http://www.knox.army.mil/center/mwfi/</u> <u>planningdir2.htm</u>> (6 January 2001).

[20] Alvin Toffler, <u>Future Shock</u> (New York: Random House, 1970), 123.

[21] Mortimer B. Zuckerman, "Rethinking the Next War," <u>U.S. News &</u> <u>World</u> <u>Report</u>, March 5, 2001, 64.

[22] Dennis Steele, "The Army Magazine Hooah Guide to Army Transformation," <u>ARMY</u>, February 2001, 22.

[23] Martin C. Libincki, <u>Illuminating Tomorrow's War</u> (Washington, D.C.: Institute for National Strategic Studies, National Defense University, 1999), 32.

Bibliography

Works and Sources Sited

Arquilla, John and David Ronfeldt. "Cyberwar is Coming!" from <u>In Athena's Camp:
Preparing for Conflict in the Information Age</u>, edited by John Arquilla and David
Ronfeldt. Santa Monica, CA: RAND, 1997.

Bell. B.B. "Medium Weight Force Initiatives, Brigade Combat Teams: What it Means to
the Armor Force." <http://www.knox.army.mil/center/mwfi/
what_it_means__.htm> (6 January 2001).

Benson, Kevin C.M. and Dana Pittard. "Armor, Cavalry, and Transformation: "New"
Cavalry for the Interim Force." <u>ARMOR</u>, March-April 2001.

Chairman of the Joint Chiefs of Staff. <u>Joint Vision 2010</u>. Washington, D.C.: United
States Government Printing Office.

Davis, Norman C. "An Information-Based Revolution in Military Affairs." from <u>In
Athena's Camp: Preparing for Conflict in the Information Age</u>, edited by John
Arquilla and David Ronfeldt. Santa Monica, CA: RAND, 1997.

Edwards, George. "Medium Weight Force Initiatives, Brigade Combat Teams: Chief of
Staff Planning Directive #2." <http://www.knox.army.mil/center/mwfi/
planningdir2.htm> (6 January 2001).

Field Manual l7-95, <u>Cavalry Operations</u>. Washington, D.C.: U.S. Government Printing
Office, 1996.

Libincki, Martin C. <u>Illuminating Tomorrow's War</u>. Washington, D.C.: Institute for
National Strategic Studies, National Defense University, 1999.

Murray, Williamson. "Introduction." from <u>Future War</u>, edited by Robert H. Scales.
Carlisle Barracks, Pennsylvania: U.S. Army War College, April, 1997.

Office of the Theater Historian. <u>Order of Battle United States Army World War II:
European Theater of Operations — Division</u>. Washington, D.C.: U.S. Government
Printing Office, December 1945.

Scales, Robert H, "Cycles of War." from <u>Future War</u>, edited by Robert H. Scales. Carlisle Barracks, Pennsylvania: U.S. Army War College, April, 1997. [Originally published in <u>Armed Force Journal International</u>, July 1997 Volume 134, Number 12.]

Scales, Robert H. "A Sword with Two Edges: Maneuver in 21st Century Warfare." from <u>Future War</u>, edited by Robert H. Scales. Carlisle Barracks, Pennsylvania: U.S. Army War College, April, 1997. [Originally published in <u>Strategic Review</u> Spring 1999 Issue, Volume 27, Number 2.]

Steele, Dennis. "The Army Magazine Hooah Guide to Army Transformation." <u>ARMY</u>. February 2001.

Toffler, Alvin and Heidi. <u>War and Anti-War: Survival at the Dawn of the 21st Century</u>. Boston, New York, Toronto and London: Little, Brown and Company, 1993.

Toffler, Alvin. <u>Future Shock</u>. New York: Random House, 1970.

Zuckerman, Mortimer B. "Rethinking the Next War," <u>U.S. News & World Report</u>. March 5, 2001.

Works and Sources Consulted

Alexander, John B. <u>Future War: Non-Lethal Weapons in the Twenty-First Century Warfare</u>. New York: St. Martin's Press, 1999.

Goourley, Scott. Army's New Ride." <u>Popular Mechanic</u>, February 2001.

Macgregor, Douglas A. <u>Breaking the Phalanx</u>. Westport, Connecticut; London: Praeger, 1997.

Murray, Williamson. "Clausewitz Out, Computers In: Military Culture and Technological Hubris." <u>The National Interest</u>, Summer 1997.

Newman, Richard J. "After the tank." <u>U.S. News & World Report</u>, 18 September 2000.

Van Creveld, Martin. The Transformation of War. New York, Oxford, Singapore, Sydney: The Free Press, 1991.